

REMARKS

After entry of this amendment, claims 1-33 remain pending. In the present Office Action, claims 14-25 and 23-33 were rejected under 35 U.S.C. § 101. Claims 1-33 were rejected under 35 U.S.C. § 112, second paragraph. Claims 1-11 and 13-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over alleged Applicants Admitted Prior Art ("AAPA") in view of Saito et al., U.S. Patent No. 6,578,064 ("Saito"). Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Saito and Bodin et al., U.S. Patent No. 5,675,762 ("Bodin"). Applicants respectfully traverse these rejections and request reconsideration.

Section 103 Rejection

Applicants respectfully submit that each of claims 1-33 recites a combination of features not taught or suggested in the cited art. For example, claim 1 recites a combination of features including: "detects that a first load of a first computer system of the plurality of computer systems exceeds a second load of a second computer system of the plurality of computer systems and migrates at least a first virtual machine executing on the first computer system to the second computer system responsive to detecting that the first load exceeds the second load".

The Office Action alleges that the AAPA teaches "migrates at least a first virtual machine executing on the first computer system to the second computer system" at page 1, lines 17-21. However, that passage states "Virtual machines may also be used to provide high availability. If a given computer system fails, tasks that were executing in virtual machines on that computer system may be transferred ("failed over") to similar virtual machines on other computer systems. Moreover, the entire virtual machine may be failed over to another computer system." Accordingly, the AAPA describes transferring virtual machines away from a computer system when that computer system fails. Since the system has failed, it is not possible that a failover is "responsive to detecting that the first load exceeds the second load". In fact, since the computer system has failed, there is really no load at all on that computer system. The failover is responsive to the failure of the computer system, not the load on the computer system.

The teachings of Saito cannot be use to overcome this deficiency in the teachings of the AAPA. To do so would change the principle of operation of the AAPA from a high availability system that recovers from the failure of a computer system to a load balancing system. Nothing in Saito teaches or suggests use in a high availability system. In essence, by teaching the detection of failure in a computer system and failing over to another system responsive to the failure, the AAPA teaches away from the alleged combination since no load can be measured when a failure has occurred. Furthermore, load balancing according to the teachings of Saito may even interfere with the high availability of operation of the AAPA. For example, if the load balancing operation does not leave enough available resources on one system to fail over another system, the AAPA high availability operation is defeated.

For at least the above stated reasons, Applicants submit that the rejection of claim 1 is unsubstantiated in the art, and the rejection should be withdrawn. Claims 2-13 depend from claim 1, and thus the rejection of these claims is not substantiated in the art and should be withdrawn as well for at least the above stated reasons. Each of claims 2-13 recites additional combinations of features not taught or suggested in the cited art. Since the rejection of claim 1 is not substantiated, it is not necessary to further highlight such additional combinations of features at this time, but Applicants reserve the right to do so.

Claim 14 recites a combination of features including: "the first computer system detecting that the first computer system has a first load that exceeds a second load of a second computer system of the plurality of computer systems; and the first computer system migrating at least a first virtual machine executing on the first computer system to a second computer system of the plurality of computer systems responsive to the detecting". The same teachings of the AAPA and Saito highlighted above with regard to claim 1 are alleged to teach the above highlighted features of claim 14. Applicants respectfully submit that the AAPA and Saito do not teach or suggest the above highlighted features, either.

Furthermore, claim 14 recites "the first computer system detecting that the first computer system has a first load that exceeds a second load of a second computer system...and the first computer system migrating at least a first virtual machine ... responsive to the detecting". Clearly, the first computer system in AAPA cannot perform the above since, under the AAPA, the first computer system has failed to trigger the fail over.

For at least the above stated reasons, Applicants submit that the rejection of claim 14 is unsubstantiated in the art, and the rejection should be withdrawn. Claims 15-22 depend from claim 14, and thus the rejection of these claims is not substantiated in the art and should be withdrawn as well for at least the above stated reasons. Each of claims 15-22 recites additional combinations of features not taught or suggested in the cited art. Since the rejection of claim 14 is not substantiated, it is not necessary to further highlight such additional combinations of features at this time, but Applicants reserve the right to do so.

Claim 23 recites a combination of features including: "select a first virtual machine ... responsive to a first load of the first computer system exceeding a second load of a second computer system of a plurality of computer systems including the first computer system; and migrate the first virtual machine to the second computer system to be executed on the second computer system". The same teachings of the AAPA and Saito highlighted above with regard to claim 1 are alleged to teach the above highlighted features of claim 23. Applicants respectfully submit that the AAPA and Saito do not teach or suggest the above highlighted features, either. For at least the above stated reasons, Applicants submit that the rejection of claim 23 is unsubstantiated in the art, and the rejection should be withdrawn. Claims 24-33 depend from claim 23, and thus the rejection of these claims is not substantiated in the art and should be withdrawn as well for at least the above stated reasons. Each of claims 24-33 recites additional combinations of features not taught or suggested in the cited art. Since the rejection of claim 23 is not substantiated, it is not necessary to further highlight such additional

combinations of features at this time, but Applicants reserve the right to do so.

Section 101 Rejection

Claim 14 was rejected as non-statutory because it could be practiced mentally with pen and paper, and that it is uncertain what performs each of the claim steps. Independent of the propriety of the rejection based on the steps being mental, Applicants respectfully submit that claim 14 does recite at least some features that are performed by a computer. For example, claim 14 recites "the first computer system detecting..." and "the first computer system migrating". Thus, these features of claim 14 are performed by the first computer. For at least this reason, Applicants submit that the section 101 rejection of claim 14 is without merit, and should be withdrawn. Claims 15-22 depend from claim 14, and thus the rejection of these claims should be withdrawn for at least the above stated reasons as well.

Claims 23-33 were rejected as non-statutory for allegedly reciting a "carrier medium" which allegedly includes transmission media, signals, etc. Applicants respectfully disagree on both counts. Claims 23-33 recite a "computer accessible medium", not a carrier medium. Furthermore, the computer accessible medium is defined to include "media accessible via transmission media or signals such as electrical, electromagnetic, or digital signals, conveyed via a communication medium such as a network and/or a wireless link". Thus, the computer accessible media includes media that are accessible via transmission media, signals, etc. The transmission media, signals, etc. are not themselves defined to be part of the computer accessible medium. Accordingly, Applicants submit that the section 101 rejection claims 23-33 is without merit and should be withdrawn for at least the above stated reasons.

Section 112 Rejection

Claims 7 and 30 were rejected for a lack of antecedent basis. Applicants have amended claims 7 and 30, and respectfully submit that the amendment overcomes the rejection.

Claims 1, 14, and 23 were also rejected under section 112. The Office Action alleges that it is not clearly understood how a first virtual machine migrates to the second computer. The Office Action parenthetically adds "i.e. virtual machine image migrates to the second computer". It is unclear whether the parenthetical comment is a suggestion to amend the claims or whether the Office Action is asserting that it is also unclear how a virtual machine image migrates to the second computer. Applicants assume that the parenthetical remark is a suggested amendment.

Applicants note that, while some embodiments may transfer the virtual machine image to the second computer, other embodiments may migrate the virtual machine (or parts thereof) in other ways. As the specification states: "A virtual machine is said to 'migrate' if it is executing on (or is assigned to) a first computer system, and its execution/assignment is moved to a second computer system." (Specification, page 8, lines 2-4). Thus, the meaning of migrate is clear and its usage is consistent with software migration from one computer to another, as would be understood by one of skill in the art. A number of examples of migrating are given, including: providing shared storage from which a computer can access the virtual machine image, transferring state from a source computer to a target computer, etc. (see, e.g., specification, page 9, line 18-page 10, line 10).

According, Applicants respectfully submit that the use of migrate, with respect to virtual machines, is clear and furthermore that there are numerous ways that the migration may occur. Describing exactly how the migration occurs is not necessary for the claims to meet the requirements of section 112. Applicants respectfully submit that the claiming of migration is clear and concise, and respectfully note that breadth is not indefiniteness (see MPEP 2173.04).

CONCLUSION


Applicants respectfully submit that the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No: 501505/5760-12200/LJM.

Also enclosed herewith are the following items:

- ☒ Return Receipt Postcard
- ☐ Petition for Extension of Time
- ☐ Request for Approval of Drawing Changes
- ☐ Notice of Change of Address
- ☐ Fee Authorization Form authorizing a deposit account debit in the amount of \$
for fees ().
- ☐ Other:

Respectfully submitted,


Lawrence J. Merkel
Reg. No. 41,191
AGENT FOR APPLICANT(S)

Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C.
P.O. Box 398
Austin, TX 78767-0398
Phone: (512) 853-8800

Date: 7/20/05